

**Partnerships and Innovation: Novel Approaches to Training, Educating, and Engaging in
Peacekeeping and Stability Operations. “An Innovative Global Health Initiative to
Complement the State Partnership Program.”**

by

Chris S. Ivanoff, DDS

**University of Tennessee College of Dentistry
875 Union Avenue
Memphis, TN 38163
civanoff@uthsc.edu**

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ORAL PRESENTATION

INTRODUCTION

I would like to thank Dr. Luan for the invitation to participate in the Peace, Stability and Interoperability workshop; and for the wonderful opportunity to be among such a distinguished and diverse assembly of guests. As an educator and civilian, I hope to bring a new perspective to this forum-one which links education and government to achieve national security goals. I know you've heard it many times, but the world is definitely becoming a smaller and smaller place. In light of the typhoon of current events afflicting humanity, and the serious global threats of terrorism, biologic and chemical warfare and others, national security is very much on the mind of all governments these days. We at UT believe that global health very much fits into the wider picture of national security. In turn, I will do my best to expose you to some of the capabilities and innovations that have been launched by our school and its Center for International Security and Public Health. We trust you will find these innovations both compatible with and can produce synergism to complement various governmental programs to fulfill common goals of national interest and specifically, build peace, stability and interoperability.

When you walk into the Marketplace over the next few days, you will notice an exhibit on the Global Health Initiative model launched by the University of Tennessee and Sofia Medical University. Among other scientific, pharmaceutical, and biosurveillance innovations, this is just one of several educational initiatives both at the pre- and post-doctoral level which fits into the broader goals of the Center for International Security and Public Health. While mirroring the unique military to military relationship of the Bulgaria-TN State partnership program, I would humbly postulate that if both initiatives were working in tandem rather than separately, it would more efficiently and effectively achieve common goals.

I. "GOHI" or the "Global Oral Health Initiative" is a unique student exchange which was launched last September by UT and SMU dental schools as a strategy to improve global healthcare. Since the program's inception, the initiative has mushroomed into a global network of dental schools that are pooling together their community service programs and opening them up to each other's students for cross-national clerkships as an optional clinic in global dentistry during their senior year to enhance students' cultural competence. By integrating global dentistry into their cultural competence training, we believe the exchanges encourage students to treat underserved communities beyond graduation. Unlike traditional outreach, the program utilizes each school's extant community service programs for truly "reciprocal" clerkships without the additional operational costs associated with beginning new community service programs; and herein lies the program's innovativeness. Since the program does not seek to create new community service programs but utilizes extant programs which are already up and running, this has enabled us to provide students with a broad range of community sites which

include Program India at Subbamatra Hospital, in Modi, India. Since students assume all travel expenses, no funds are needed either to subsidize the students or the extant community service programs. Students are provided lodging by the host school while students pay for airfare, visa expenses, and health insurance. The program is also based in evidence. In a cross-national survey which we recently published in the Journal of Dental Education, dental students indicated overwhelmingly that they would value international exchanges which may, in turn, increase students' knowledge and self-awareness related to cultural competence. Preliminary KEPI assessments, before and after exchanges, also suggest enhanced student preparedness, as well as interpersonal communication skills to manage diverse patient populations and function successfully in a multicultural work environment.

The program's objectives are achieved through education, direct patient care and humanitarian service to underserved populations in community clinics in each other's country. The cross-national clerkships are coordinated with government and nongovernment partners to abate the potential harms of traditional volunteering providing short-term clinical treatment. The month-long service-learning program allows students to use their clinical skills in real-life situations, while fostering civic responsibility in explicit partnership with the community. In turn, exposing the students to the social, environmental and cultural influences affecting health and disease increases their understanding of cultural attitudes towards oral health and the doctor-patient relationship students can carry into practice back home. Team-oriented outreach also provides them with valuable professional exchanges, where faculty and students can discuss emerging issues and learn from their global colleagues about healthcare barriers faced by disparate groups. Graduating dentists and physicians who are community-oriented members of a culturally competent healthcare workforce can, in turn, improve patient-provider communication and access to care among disparate groups. The curriculum aims, therefore, to reduce healthcare disparities, both domestically and abroad, by encouraging students to treat underserved communities after graduation.

While the focus is on inculcating students with the knowledge to effectively engage with other cultures and vastly differing health systems, the US-Bulgarian model provides further for multidisciplinary partnerships with foreign schools in key geographical regions integral to the State Partnership Program. In relation to the theme of this workshop, the low-maintenance, self-funded GOHI program exchanges knowledge and skills with partner-institutions which can further support their nation's long-term ability to provide for the population. Healthcare teams deliver healthcare, while transferring information and applying technology can promote capacity building. The model may also potentially help EUCOM to foster good will, bringing further stability to the region. The diverse and complex health system challenges faced by host countries also offer students an opportunity to improve health system performance, health outcomes, and sustained impact in different settings. While providing necessary skills to deal with diverse populations encourages graduates to serve disparate groups more effectively, interaction with

students may further improve cultural awareness and skills among U.S. military personnel and ultimately strengthen relationships to facilitate access and interoperability.

As mentioned earlier, this US-BG model mirrors the Bulgaria-TN National Guard military partnership which is only one of 64 worldwide partnerships that make up the State Partnership Program. While the 118th TN Medical Group has provided medical and dental care to the rural Bulgarian population in a joint effort with the Bulgarian Ministry of Health, SPP sponsorship of programs such as GOHI could in effect allow students, faculty and military to jointly improve the healthcare capacity of many other partner nations. While joint dental/public health missions could potentially assist future graduates gain valuable understanding of civilian-military relationships, this type of collaboration could improve Partner Nation capacity at multiple levels of engagement which, ultimately, enhance long-term, self-sustaining capability that supports U.S. Government regional security priorities. This type of partnership can also increase links between educational institutions to step up collaborative research. The ultimate goals would be to build research capacity among partner nations to implement evidence-based science to scale up novel health services and more effectively achieve health goals; to support the identification and integration of evidence-based solutions that are socially and culturally appropriate for public health needs; and to leverage medical capabilities of partners to detect, respond to and prevent disease outbreaks with evidence-based solutions. Strengthening their ability to detect, respond to and prevent disease outbreaks, biosurveillance also leverages the medical capabilities of partner nations for disaster preparedness to further protect their citizens. By bolstering partner nations' civil sector capabilities and improving living conditions, partner nations are placed on a path toward long-term, self-sustaining capability that supports regional security cooperation.

II. UT is very active in building the Medical Emergency Capacity of partner nations.

A key example is the **TRAUMA CARE STRATEGIC INFRASTRUCTURE JOINT DEVELOPMENT PROGRAM** between UT and King Saud University to develop a LEVEL 1 Trauma Center in the Saudi Peninsula. Thousands of lives will potentially be saved thanks to the development of the Level I Trauma Center and the introduction of new medical procedures designed to stabilize blunt trauma or penetration injuries within the first hour of occurrence. Using a unique trauma team concept, diagnostic, operative and intensive care faculty supervision, together with a multispecialty team approach, optimal patient care and excellent resident education is promoted. A broad-based clinical research program also conducts clinical and laboratory investigations into the cardiopulmonary, metabolic and septic consequences of trauma and shock.

At the foundation of UT's healthcare capability with trauma and emergency medicine is recruiting exclusively from the United States Army Special Forces Medical Sergeant. The extraordinary medical capabilities make Special Forces Medical Sergeants the finest first response and trauma medical technicians in the world. They specialize in trauma management, infectious diseases, cardiac life support and surgical procedures, with a basic understanding

of veterinary and dental medicine. Beyond their training, medical personnel have over a decade of treating trauma patients in some of the worse conditions imaginable.

To develop the Trauma Care Center, an innovative education model takes training to the point of care through Trauma Mentor Teams engaged on site at hospitals of partner nations. This is accomplished in three phases, each building upon the output of the preceding phases. **PHASE 1** is an initial assessment of capabilities and infrastructure to engage in strategic planning; **PHASE 2** is the deployment of Trauma Mentor Teams at partner hospitals to conduct training and assessment; **PHASE 3** is the actual launching of the Trauma Care Center.

From operational consulting, optimized workflow design, quality-based processes and functional planning to actual construction, procurement and facility management support, the UT partnership provides mission-centric, individualized and fully integrated solutions for organizational needs. The team provides an optimum range of services and capabilities. These include EMT/paramedic training, ER management and staffing, trauma surgery, telecommunications, pharmacological supply chain, and others. Ultimately the strategic partnership has one objective—near immediate impact on Saudi national trauma care capability.

The UT team assists in overcoming any shortage of personnel and/or technology challenges. These efforts include culture transformation, strategic planning, system design and program/project management. Skilled and experienced UT staff provide the Saudis support to overcome critical temporary personnel shortages and can deploy up to 10 Trauma Mentor Teams simultaneously based on goals and objectives of the host institution. The TMT capability, initially provided by UT will ultimately become a service that will be provided by the host institution throughout the entire geographic region.

The heart of the engagement is the deployment of Trauma Mentor Teams (TMT) to selected hospitals as directed by the host institution and Ministry of Health. The TMT has dual purpose: 1) impact the trauma capability of the facility engaged; and, 2) hands on assessment of real conditions and capabilities in the field to provide input to strategy and curriculum development for the Trauma Care Center.

The TRAUMA MENTOR TEAMS are employed as follows: 1) Each TMT works on site at the host city for a 60 day period. The TMT is composed of 3 former SFMS and one ER/trauma physician. Special Force Medical Sergeants are on site for the full 60 days and the physician for 2 weeks. The medical sergeants have specific skill sets to assess operations, medivac and telecom capabilities, in addition to pharmacological and medical supply chain effectiveness. There is also an EMT/Paramedic classroom training program in addition to hands on ambulance ride-along supervision. The medical sergeants conduct an 8 week training program for EMT/Paramedics with 2 hours of classroom training per day, 5 days per week for a total of 80

hours of instruction. They additionally conduct ambulance ride-alongs to provide instruction and directly assess EMT capabilities.

The third component of this program is a Physician exchange and continuous trauma surgeon rotation at UT's Level 1 Trauma Center in Memphis. The TMT ER physician spends two weeks at the target facility observing ER/trauma operations, providing feedback to the staff and developing facility assessment. In parallel, ER/trauma physicians from the target facility conduct 21 day rotations at UT's Level 1 Trauma Center in Memphis, TN. During the engagement period, faculty participate in 3 rotations of two physicians at a time for a total of 6 rotation opportunities during the engagement period. Finally, the last program component is audit development, report submission, remediation recommendations and implementation supervision. At the 30 day midpoint of the engagement, the TMT submits an audit report to the facility management outlining specific operational changes in addition to procurement and supply chain recommendations. To the extent possible, the TMT supervises implementation of recommendations during the remaining 30 days of the engagement.

III. The GOHI and the Trauma Care Center are just two innovative examples of the CISP which works to institute an integrated, coordinated, and results-driven approach to global and public health. It does this by: (1) seeking partnerships to support global health through agencies such as the US Agency for International Development, the Department of Health and Human Services, the Center for Disease Control, the National Institute of Health and others; and (2) by leveraging pharmaceutical company resources for diseases by partnering with other governments and NGO (Bill & Melinda Gates Foundation) and pharmaceutical companies like GlaxoSmithKline, AstraZeneca, Sanofi Pasteur. UT's Plough Center for Sterile Drug Delivery laboratories also contain a core processing complex designed for academic instruction, as well as for the processing of sterile drug forms. It provides the capacity for small-scale manufacturing of sterile preparations and development of new sterile products in parenteral medications technology.

The Plough Center together with UT's Biocontainment lab are valuable resources that can potentially leverage the biosurveillance capacities of partner nations. This is bolstered with training opportunities in microbial pathogenesis featuring host genetics and susceptibility to infections caused by various pathogens including: *Chlamydia*, *Francisella tularensis* (5 type A strains), *Burkholderia*, Multi-drug resistant tuberculosis, Psittacosis, SARS, Influenza, Leishmania, Monkey pox virus, Japanese encephalitis virus, Rift Valley fever virus and others. Opportunities to work in the new Regional Biocontainment Laboratory are also supported by an NIH Training Grant in Bacterial Pathogenesis which additionally provides support for under-represented minority students.

In conclusion, all these innovations reflect the capability of UT which aims: to enhance the global community's knowledge about how health systems operate; to identify which health systems strengthening activities are associated with improved health system performance, health outcomes, and sustained impact in different settings; to provide technical expertise to cover the diverse and complex health system challenges faced by host countries; to work with host countries to build ownership and capacity for Health System Strengthening; and to facilitate the development of country-led research and research capacity building. The goal is to assist host countries to a) close the gap between advances made in evidence-based interventions and services, and b) the effective application and implementation of these interventions.

Thank you for your time.